## **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	121172	(piezo piezoelectric actuator) with (signal pulse stimul\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:04
L2	12847	(piezo piezoelectric actuator) with (signal pulse stimul\$3) with (eject\$3 record\$3 print\$3 drop\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:10
L3	69565	("347").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/01/21 17:39
L4	27724	(piezo piezoelectric actuator) with (channel path chamber) with (ink liquid fluid toner drop\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 17:41
L6	2498	2 and 3 and 4	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 17:41
L7	38888	(piezo piezoelectric actuator) with (size expand\$3 shrink\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:05
L8	1228	6 and 7	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 17:43
L9	7299	(347/54,55,56,57,61,62,68,69,70,72,75).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/01/21 17:44
L10	640	8 and 9	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 17:46
L11	11092	(347/5,6,9,10,11,20,48,23,54,55,56, 57,61,62,68,69,70,72,75).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/01/21 17:46
L12	833	8 and 11	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 17:46

## **EAST Search History**

L13	304	12 and @py<"2003"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:01
L17	19556	(piezo piezoelectric actuator) with (signal pulse stimul\$3 voltage heat\$3) with (eject\$3 record\$3 print\$3 drop\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:05
L18	303	((piezo piezoelectric actuator) with (size expand\$3)) and 4 and 11 and 13 and 17	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:09
L19	9117	(piezo piezoelectric actuator) with (signal pulse stimul\$3 voltage) with (size expan\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:10
L20	562	12 and 19	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:11
L21	205	18 and 19	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/01/21 18:11
S15 0	1220166	(chang\$3 deformat\$3 flexible flexibility expand\$3 extend\$3 amplif\$3 enlarg\$3 increas\$3 spread\$3 strecth\$3 swell\$3 thicken\$3 widen\$3) with (size volume)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 1	69021	("347").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/12/08 13:53
S15 2	13969	S150 and S151	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 3	950603	(fluid ink liquid) with (channel path canal duct chamber pipe passage tunnel)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 4	9218	S152 and S153	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53

## **EAST Search History**

S15 5	205659	(stimulus pulse signal) with electrode	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 6	1873	S154 and S155	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 7	5515	(fluid ink liquid) with (channel path canal duct chamber pipe passage tunnel) same (electrode with (stimul\$3 signal pulse))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 8	891	S156 and S157	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S15 9	584	S158 and @py<"2004"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:56
S16 0	134130	hydrogel (water with gel)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:53
S16 1	6	S159 and S160	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2006/12/08 13:56